Work Orde					*918	361*							Page
Revision ID:	D350-591-2 Heli-Access-S				Accept	*N900	040	100)*	-	Start Stop		S1* S2*
Start Date: Required Date: Reference:	10/18/12	Start Qty: Req'd Qty		*4°		Cust Item I Customer:	D:					1 VI	. 7/
Approvals:	Process Pla	an:	/	Date:	Tooling: SPC (Y/N):		ate:	-		Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II)	Operation Description			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr									. 1341		
D3078	A												
DSI 9472	Α			LSD.									
*100		DOCUMENT	CONTROL	,	0.00	610							
DC Document Control			lemo	uafile and type labe	0.00 els as per PPP D350-591-213	CHG003	chulie					* **	

110

110 Large Fab

Large Fab

Memo

0.00

0.00

Large Fab

1-Cut D2622-120 extrusion to 59.75" long as per Dwg D3078 2-Drill extrusion as per Dwg D3078 using Jig DT8680 for rivets.

3-Deburr

NCR:														
									,		QA Closed:	Date:		
Mark Orde	``.					DISPOSITIO	ON			AGAINST I	DEPARTMENT	PROCESS		
Work Orde	٠.	-		<u> </u>		Re	work		Skid-tube	Crosstube		Water Jet	Engineering	
Part N	١o.						Scrap		Machining	Small Fab	Pro	d. Eng. Coor.	Quality	
						Use	-as-is	Therm	noforming	Finishing	Rec/Sto	re/Packaging	Other	
NCR N	۷o.					Work Order U	odate		Large Fab	Composite		Supplier		
Root					Desci	iption of work order u		Initial	Ad	tion	Sign &			
Cause		Date	Step	Qty		or Non-conformance		hief Eng	Desc	ription	Date	Verification	QC Inspector	
Doc/Data														
Equip/Tooling	_													
Operator							Į							
Material														
Setup														
Other		÷												
Process	-													
Supplier Training														
Unapproved						*								
- Порти	L	<u> </u>	1		E		FAL	JLT CATE	GORY			<u> </u>		
Landi	ng (Gear				General								
		Bending				Bend		Grain			Ovalized		Pressure/Forced	
		Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure	
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld	
		Crushed/	Crimped	÷ 11		Burrs		Instruct	ions Incomplete,	/Unclear	Part Lost/M	issing	Wrong Stock Pulled	
		Cuffs				Contamination		Mainte	enance		Part Moved			
		Heat Trea	at			Countersink		Mislabe	eled		Positioned \	Wrong	 1	
	L	Inspection	n Strip in	Tube		Cut Too Short		Misread	1		Power Loss,	'Surge	Other	
		Ripples in	Bend			Drill Holes		Offset						
		Torque W	aves in l	Extrusi o	n	Drawing		Out of (Calibration					

Out of Sequence

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish Folio

Work Orde October-19-12		861		*918	361*							Page 2
Revision ID:	D350-591-21		The second secon	Accept	*N900	040	100	ገ*	Setu	p Star Stor	IV	S1*
Start Date: Required Date:	Heli-Access-St 10/18/12 11/09/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*		Cust Item I Customer:	D:					^N	S2*
Reference:		n:	_	Tooling: SPC (Y/N):		ate:			Run	Star Sto _l	I <i>Л</i>	R1* R2*
Sequence ID/ Work Center II)	Operation Description QC6- Inspect dimension	ns to drawing	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	Q		Reject Number	Insp. Stamp
120 QC Quality Control		Memo		0.00		ţ.	24	_@	_la-	-10-6	રપ્	89
³⁰ *130*		Large Fab		0.00				; (. f		DS.
Large Fab Large Fab		2-Weld Sup D3072 A/R Alum	d for welding FWD ONLY oport using Jig DT8681, w inum Rod <u>MJJ 358</u> d Plate flush <i>NJJ 43</i> J		QSI 004 & Dwg				-{	7	,	12.11.01 Le 12.11

140

QC9- Inspect visual per QSI004- Fusion Welds

0.00

140

Memo

0.00

Quality Control

B-11-03



											DQA:	Date	2:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	VFORM	ANCE / UPDATE		•			
											QA Closed:	Date	e:	
Work Orde	ar:	*				DISPOSITION			AGAINS	T DE	PARTMENT	PROCESS		
Work Orde	-					Rework	1		Skid-tube Crosstub	e]	Water Jet	\neg	Engineering
Part !	Vo.					Scrap]		Machining Small Fal	b	Pro	d. Eng. Coor.		Quality
						Use-as-is			noforming Finishin	_	Rec/Stor	e/Packaging	_	Other
NCR I	۷o. ِ					Work Order Update	J		Large Fab Composit	e	j	Supplier		
Root					Descri	ption of work order update		Initial	Action		Sign &			
Cause		Date	Step	Qty	•	or Non-conformance	Ch	nief Eng	Description		Date	Verification	\perp	QC Inspector
Doc/Data														
Equip/Tooling	Ш		•				1				,			
Operator														
Material	Ш													
Setup					- ;	/ · ·								
Other	Ш				,	•								
Process	Ш													
Supplier	Ш													
Training	Ш				<u> </u>									
Unapproved			\ \ \.	<u> </u>	<u> </u>		<u> L</u>				<u> </u>			
			_				AUI	LT CATE	GORY					
Landi	_					General		1		-	۱	Г	一.) /r
	\vdash	Bending	_			Bend	-	Grain		-	Ovalized	. , <u> </u>	_	Pressure/Forced
	\vdash	Centre No	ot Conce	ntric to	O/S	BOM/Route	-	Hardwa		-	Over/Under	H		Temperature/Cure
	\vdash	Cracks			<u> </u>	Broken/Damaged	-	-i	on Incomplete	-	Part Incorre			Weld
	-	Crushed/	Crimped.		<u> </u>	Burrs	-	-	ions Incomplete/Unclear	\vdash	Part Lost/M	issing [\	Wrong Stock Pulled
	\vdash	Cuffs				Contamination	\vdash	Mainte		\vdash	Part Moved	• •		
	_	Heat Trea		-	<u> </u>	Countersink	-	Mislabe		-	Positioned \	· ·	-	2.1
r	-	Inspectio	•	Tube		Cut Too Short	_	Misread	i	L	Power Loss/	Surge	10	Other
	1	Ripples in	1 Bend		1	Drill Holes		Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

Work Orde				*918	3613	k							Page 3
Revision ID:	D350-591-2 Heli-Access-S			Accept	*N	900	040	100)*	Setup	Start Stop	*N:	S1*
	10/18/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*			ist Item I istomer:	D:				·	"IVI	S2*
Approvals:		nn:		Tooling: SPC (Y/N):			ate:			Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II 150 *150* QC Quality Control)	Operation Description QC5- Inspect part comp	leteness to step on W/O	Set Up/ Run Hours 0.00	15 15 100	Fool ID	Tool#	Plan Code	Accep Qty	t Re Qt		Reject Number	Insp. Stamp
*160 *160* HandFinish Hand Finishing		Chemical Conversion Co	oat per QSI005 4.1	0.00					4	X	4	H 	11/11/0
*170 *170*		QC3- Inspect Part Finish Memo	i	0.00					4	6	12	11-7	Sage .

Quality Control

											DQA:	Date:	9
NCR:	Yes	/ No				WORK ORDER NON-	100	NFORM	MANCE / UP	DATE	·		
		-									QA Closed:	Date:	
Work Ord	er:					DISPOSITION				AGAINST DI	PARTMENT	PROCESS	
Part I	- . No.					Rework Scrap Use-as-is Work Order Update		t Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		i			÷	•	34		CORV				
Landi		`					AUL	T CATE	GORY				and the state of t
Landi	_	iear Bending				General Bend		Grain			Ovalized		Pressure/Forced
	-	Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	-	Cracks			-/-	Broken/Damaged		-{	on Incomplete		Part Incorre	-	Weld
	П	Crushed/	Crimped.		<u> </u>	Burrs		4	ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance		Part Moved	<u> </u>	
		Heat Trea	it			Countersink		Mislabe	eled		Positioned \	Vrong	_
		Inspection	n Strip in	Tube		Cut Too Short		Misread	d		Power Loss/	'Surge	Other
		Ripples in	Bend			Drill Holes		Offset		_			
		Torque W	aves in E	xtrusio	n \lceil	Drawing		Out of 0	Calibration	*\$\$			

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde				*91	861*							Page 4
Item ID: Revision ID: Item Name: Start Date:	D350-591-2 Heli-Access-1 10/18/12	Step, Short LH Start Qty: 4.00	*/	Accept	*N900		100	ገ*	Setup	Start Stop	*N: *N:	S1* S2*
Required Date: Reference:	11/09/12	Req'd Qty: 4.00	*4	1*	Customer	:						
Approvals:		an:				Date:			Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II 200 *200* Large Fab Large Fab	D	2-Bevel Aft 3-Inspect fo 4-Weld Aft A/R Alui	minum Rod <u>1223</u> d Plate flush	per QSI 024 SI 004 & Dwg D3078	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp Ae 12.11.
210 QC Quality Control		Memo		0.00	, Valia							
*220 *270* QC Quality Control		QC5- Inspect part comp	oleteness to step on	W/O 0.00) Saliy			4U	<u>'</u> H			

NCR: Y	·													
		1							•		QA Closed:	Date:	•	
Work Orde	r: _					DISPOSITION			ci []	AGAINST DE	PARTMENT,	PROCESS Water Jet	Engineering	
Part N NCR N	-	· ·				Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	ł	d. Eng. Coor. re/Packaging Supplier	Quality Other	
Root	Т				Descri	tion of work order update	Π	Initial	Ac	tion	Sign &			
Cause	١	Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved							AUI	LT CATE	GORY					
Landin	ng G	iear				General								
	Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion					Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	are ion Incomplete tions Incomplete/ enance eled	'Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
1		Torque W	raves in t	:xtrusio	n }	Drawing	1	Jour or (Calibration					

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord October-19-12				*918	361*				Page 5
Item ID: Revision ID: Item Name:	D350-591-2	213 Step, Short LH		Accept	*N900040	100)* 5	Setup Start Stop	*NS1* *NS2*
Start Date: Required Date: Reference:	10/18/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*		Cust Item ID: Customer:				IVI.57
Approvals:		lan:	Date:	Tooling: _ SPC (Y/N):	Date:		F	tun Start Stop	*NR1* *NR2*
Sequence ID/ Work Center II 230 *230* HandFinish Hand Finishing	D	Operation Description Chemical Conversion Co	oat per QS1005 4.1	Set Up/ Run Hours 0.00	Tool ID Tool #	Plan Code	Accept Qty		Reject Insp. Number Stamp
240 *240* Powdercoat Powder Coating M \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	478	White Gloss(Ref:4.3.5.1 Memo START TIN OVEN TEN FINISH TIN	1E: 12 -,0 - 1PERATURE: 30	0.00 0.00		ć	4X)		M
250 *250* HandFinish	_	Wing Walk as per dwg (2SI005 4.4 Batch /25	0.00		,	H d		bl 12-11-15

Memo

Hand Finishing

NCR: Y	R: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date:													
		1									QA Closed	: Da	te:	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMEN	r/PROCESS		_
Part N	_	1				Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet od. Eng. Coor. ore/Packaging Supplier		Engineering Quality Other
NCR N	NO					work Order Opdate	ال		raige rab[composite	J	Supplier	ш	لـــا
Root Cause		Date	Step	Qty	l .	ption of work order update		nitial iief Eng		tion ription	Sign & Date	Verificatio	ın	QC Inspector
Doc/Data	$\overline{}$	Date	Step	Q (y	<u> </u>	or won comormance		ner eng	Desc	TPCOT	Dute	Vermeutio		·
Equip/Tooling	H												•	
Operator		i .			¥									
Material	П													
Setup	П				.20									
Other	П	i												•
Process		1			ļ	V.								
Supplier														
Training							1							
Unapproved	П	1									}			
						F	ΑUI	T CATE	GORY					
Landi	ng G	iear				General		=			_			
,	Ш	Bending				Bend		Grain	4		Ovalized			Pressure/Forced
	Ш	Centre No	ot Conce	ntric to	O/S	BOM/Route	L	Hardwa			Over/Unde	er tolerance		Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorr	ect		Weld
	Ш	Crushed/	Crimped.			Burrs	\perp		ions Incomplete	/Unclear	Part Lost/I	_		Wrong Stock Pulled
	\vdash	Cuffs			_	Contamination		Mainte		_	Part Move			
0.0	Н	Heat Trea				Countersink	_	Mislabe	*		Positioned	•	-	
	Ш	Inspectio	n Strip in	Tube		Cut Too Short	L	Misread	d		Power Los	s/Surge		Other
	Ш	Ripples in	Bend			Drill Holes	_	Offset						
		Torque W	/aves in E	Extrusio	n	Drawing		Out of	Calibration					

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde October-19-12					*918	361*							Page 6	
tem ID: Revision ID:	D350-591-2	213			Accept	*N900	040	100)*	Setup	Start	*N	S1*	
Item Name:	Heli-Access-	Step, Short LH									Stop	*N	S2*	
Start Date: Required Date: Reference:	10/18/12 11/09/12	Start Qty: 4.00 Req'd Qty: 4.00		*4* *4*		Cust Item I Customer:	D:							
Approvals:	Process Pl	an:	Date:		Tooling: _	Da	ate:			Run	Start	*N	R1*	
	QC:		Date:_		SPC (Y/N):	Da	ate:				Stop	*N	R2*	
Sequence ID/ Work Center II	D	Operation Description			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	t Rej		Reject Number	Insp. Stamp	
260		QC3- Inspect Part Finish			0.00				,		,	. 1	1	
260 QC Quality Control		Memo			0.00				4htl.	L	d	W		5
270		Pick Kit			0.00				~		A >	1.		S
970 Packaging Packaging		Мето			0.00				SP			4/15	5 <i>&</i> /	+
²⁸⁰ *280*		QC4- 100% Inspect kits f	for complete	ness	0.00 DA S	121u1u								
QC		Memo			0.00	· · · · · // 6			-					

Quality Control

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UPDAT	ΤE	•		•
									·		QA Closed:	Date	•
Mork Ord	۰		. <u> </u>			DISPOSITION				AGAINST DEF	PARTMENT	PROCESS	
Work Ord	er: -					Rework	1		Skid-tube C	Crosstube		Water Jet	Engineering
Part I	No.					Scrap		ſ	Machining	Small Fab Finishing		d. Eng. Coor.	Quality
NCR I	No.				<u>-</u>	Use-as-is Work Order Update		i	~ —	omposite	Nec/3tol	Supplier	
Root					Descrip	ption of work order update	1	nitial	Action		Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Descripti	on	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ш		l										
Operator													
Material	Ш												
Setup	Ш												
Other 、	Ц												
Process													
Supplier	Ш												
Training	Ш												
Unapproved							<u> </u>						
							AUL	T CATE	GORY				
Landi						General	_	7			1		¬
	Ш	Bending			<u> </u>	Bend		Grain			Ovalized	_	Pressure/Forced
	Ш	Centre N	ot Conce	ntric to ()/S	BOM/Route		Hardwa	re		Over/Under	j	Temperature/Cure
	Ш	Cracks				Broken/Damaged		Inspect	on Incomplete	<u> </u>	Part Incorre	ct _	Weld
	Ш	Crushed/	Crimped			Burrs		Instruct	ions Incomplete/Uncl	ear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Trea	at			Countersink		Mislabe	eled		Positioned \	Vrong	
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	d		Power Loss/	Surge	Other
		Ripples ir	n Bend			Drill Holes		Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Work Ord October-19-12				*918	361*			Page 7
Item ID: Revision ID: Item Name:	D350-591-2 Heli-Access-S	13 Step, Short LH		Accept	*N90004010	O* Setu	p Start Stop	*NS1* *NS2*
Start Date: Required Date Reference:	10/18/12 : 11/09/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*		Cust Item ID: Customer:			
Approvals:	Process Pla	an:	Date:	Tooling: SPC (Y/N):	Date:	Run	Start Stop	*NR1* *NR2*
Sequence ID/ Work Center I 290 * 200* Packaging Packaging	D	Operation Description Packaging Memo Identify and Location: PPP Rev:	pack for shipping as per	Set Up/ Run Hours 0.00 0.00 PPP D350-591-213	Tool ID Tool # Plan Code			Reject Insp. Number Stamp
300 *300*		QC21- Final Inspection Memo	- Work Order Release	0.00		AND ROLL		2/11/19

Quality Control

mr 12-11-29

												DQA:	Da	te:	,
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UPD	ATE	,	QA Closed:	Da	ta·	
Work Orde	er:					DISPOSITION				AGAINST D	EP	ARTMENT/	PROCESS		
Part f	_					Rework Scrap Use-as-is		1	Skid-tube Machining noforming	Crosstube Small Fab Finishing			Water Jet d. Eng. Coor. e/Packaging		Engineering Quality Other
NCR I	No					Work Order Update]		Large Fab	Composite			Supplier		
Root					Descri	ption of work order update		nitial	Actio	on	T	Sign &	<u></u> .		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Descri	ption		Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														;	
			ı			F	AUI	T CATE	GORY			.1			
Landi	ng G	ear				General			•		_				-
		Cracks Crushed/C Cuffs Heat Trea	Contamination					4 '	ion Incomplete ions Incomplete/Ui enance eled	nclear		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct issing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	F	Ripples in	Bend			Drill Holes		Offset							

Out of Calibration
Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Picklist Print

October-19-12 12:48:32 PM

Work Order ID:

91861

Parent Item:

D350-591-213

Parent Item Name:

Heli-Access-Step, Short LH

Start Date: 10/18/12

Required Date: 11/09/12

Page 1

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:B05.10.14Modified step 10KJ/EC

IPP Rev:C 06-06-19 Added D2732-030 AS PER DSI9294 JLM

IPP Rev:C 06-06-27 Revised as per DSI9340 JLM

IPP Rev:D 10.03.17 incorporate seq IPP

180 to 200 remove qc5 DD verified by:JLM
Rev:E 10.11.15 update qty on AN4-11A DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2622-120C Step Extrusion		Manufactured	No			110	Each	208.3900	0.5	2	M 10	2.10.	24
				<u>Location</u> HALL		<u>Loc Oty</u> 16.37	<u>Lo</u>	c Code					

				M 12.10.24
Location	Loc Oty	Loc Code		
HALL	16.37			
46910	2			
64409	6			
66970	7.7			
68293	0.25			
72131	0.42			
WA	182.66			
81507	1.88			
83894	12.38			
88513	28.4		_2	
89750	140			
WA013	9.36			
75781	2			
77612	7.36			

NCR:	Yes	1	No

DQA: Date:

NCR: Y	es / No				WORK ORDER NON-	COL	NFORM	MANCE / UPDATE		QA Closed:	Date	· ·
			***		1					QA Closed:	Date	5.
Work Orde	ır.				DISPOSITION			AGAIN	NST DE	PARTMENT/	PROCESS	
WOIK Olde	1.				Rework	٦ أ		Skid-tube Crosstu	ube		Water Jet	Engineering
Part N	lo.				Scrap	7		Machining Small F		Pro	d. Eng. Coor.	Quality
					Use-as-is	1	Thern	noforming Finish	ning	Rec/Stor	e/Packaging	Other
NCR N	lo				Work Order Update			Large Fab Compos	site		Supplier	
			·					 				
Root					ption of work order update	ı	nitial	Action		Sign &		001
Cause	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
oc/Data												
quip/Tooling	_	1				ļ						
perator												
/laterial	\dashv											
etup												
Other	-											
Process Supplier	\dashv											
raining												
Jnapproved												
	· L	<u> </u>	<u> </u>			FAUL	T CATE	GORY		<u> </u>	<u> </u>	
Landir	ng Gear			***	General							
ſ	Bending	<u> </u>			Bend		Grain			Ovalized	[Pressure/Forced
	Centre I	Not Conce	ntric to	o/s	BOM/Route		Hardwa	are		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct	Weld
	Crushed	l/Crimped			Burrs		Instruct	tions Incomplete/Unclear		Part Lost/M	issing	Wrong Stock Pulled
	Cuffs	Contamination					Mainte	enance		Part Moved		
	Heat Treat Countersink						Mislabe	eled		Positioned \	Wrong _	
	Inspection Strip in Tube Cut Too Short						Misread	d		Power Loss/	'Surge	Other
	Ripples in Bend Drill Holes						Offset					
	Torque	Waves in	Extrusio	n 🗌	Drawing	Out of Calibration						
	Turning	Sequence	9		Finish	Out of Sequence						
	Turning Sequence Finish Wave/Twist in Tube Folio						Outside	P Dimensions				

October-19-12 12:48:32 PM

Work Order ID:	91861									
Parent Item:	D350-591-213						Start I	Date: 10/18/12		Required Date: 11/09/12
Parent Item Name:	Heli-Access-Step,	Short LH					Start	Qty: 4.00		Required Qty: 4.00
D3067-1 End Plate		Manufactured	No		130	Each	226.0000	1	4	Man.01
				Location	Loc Qty		Loc Code			
				WA	222					
				78608	4					
				83855	1					
				90177	15					
				90178	22				<u></u>	•
				90335	60			4		
				90336 90486	60					
					60			-		
				WA016	4					
				67582 68214	2					
				79607	1					
D3063-1		M C 1	No	77007	130	Each	32.0000	1	4	\mathcal{N}
Support		Manufactured	140		150	Lacii	32.0000		4	M12.11.01
				<u>Location</u>	Loc Qty		Loc Code			
				WA016	32				_	
				71886	32				•	
MS20600-AD4W4 Rivets		Purchased	No		180	Each	1,578.0000	16	64	Ae 12.11.12
				Location	Loc Oty		Loc Code			
				321	18					
				121652	18					
				ST311	1000				_	
				123021	1000			(6)	\perp	
				ST321	560					
				121011	9					
				121340	39					
				121444	512					

Material Setup Other Process										DQA:	Date:	
Disposition Rework Skid-tube Crosstube Prod. Eng. Coor. Quality Description of work order update Chief Eng Description Date Verification QC Inspector Dec/Data Equipy/Tooling Equipy	NCR: Y	'es /	No			WORK ORDER NON-C	ONFO	RMANCE / UP	PDATE			•
Rework Skid-tube Crosstube Rework Machining Small Fab Prod. Eng. Coor. Quality Description of work order update Chief Eng Description Date Verification QC Inspector Doc/Data Caujer Doc/Data Caujer Chief Eng Description Date Verification QC Inspector Doc/Data Caujer Chief Eng Description Date Verification QC Inspector Chief Eng Description Date Verification QC Inspector Doc/Data Chief Eng Description Date Verification QC Inspector Doc/Data Chief Eng Description Date Verification QC Inspector Doc/Data Chief Eng Description Date Verification Date Verification Date Description Description Date Description Description Date Description Date Description D										QA Closed:	Date:	·
Rework Scrap Skid-tube Crosstube Prod. Eng. Coor Quality NCR Nor Nor Nor Nor Order Update Nor						DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No. Scrap Use-as-is	Work Orde	er:				·	,	ci. (6	1	Water let] Facincaring
NCR No.		1 -				1 ⊢				Pro		·
NCR No.	Partiv	10		·	<u> </u>		The	· —		4	· ·	· —
Root Cause Date Step Qty Or Non-conformance Chief Eng Description Date Verification QC Inspector Doc/Data Equip/Tooling Operator Setup Conformance Chief Eng Description Date Verification QC Inspector Doc/Data Equip/Tooling Operator Operator Operator Operator Operator Other Operator Ope	NCR N	lo				1 <u>—</u>	''''		~ 	1100/3101		
Cause Date Step Qty or Non-conformance Chief Eng Description Date Verification QC Inspector Doc/Data Equip/Tooling [Quip/Tooling [Quip/Tool	New	•0				Work order opudie	,	Edige do				J
Doc/Data Content Con	Root				Descri	iption of work order update	Initial	A	ction	Sign &		
Equip/Tooling	Cause	Dá	te Ste	p Qty	<u> </u>	or Non-conformance	Chief Er	g Des	cription	Date	Verification	QC Inspector
Operator Material Setup Other Process Supplier Training Unapproved	Doc/Data											
Material Setup Other Process Supplier Training Unapproved Bending Gear General Bending Centre Not Concentric to O/S BOM/Route Grain Ovalized Over/Under tolerance Temperature/Cure	Equip/Tooling	_										
Setup Other Process Supplier Training Unapproved Unapproved Bending Centre Not Concentric to O/S BOM/Route FAULT CATEGORY Grain Hardware Over/Under tolerance Temperature/Cure	Operator											
Other Process Supplier Training Unapproved	Material			ļ			1					
Process Supplier Training Unapproved FAULT CATEGORY Landing Gear General Bending Centre Not Concentric to O/S BOM/Route Grain Hardware Ovalized Over/Under tolerance Temperature/Cure	Setup											
Supplier Training Unapproved FAULT CATEGORY Landing Gear General Bending Centre Not Concentric to O/S BOM/Route Grain Hardware Grain Hardware Ovalized Over/Under tolerance Temperature/Cure	Other											
Training Unapproved FAULT CATEGORY Landing Gear General Bending Bend Grain Ovalized Pressure/Forced Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure	Process											
FAULT CATEGORY Landing Gear General Bending Bend Grain Ovalized Pressure/Forced Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure	Supplier											
FAULT CATEGORY Landing Gear General Bending Bend Grain Ovalized Pressure/Forced Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure	ł * †	\square										
Landing Gear Bending Centre Not Concentric to O/S BOM/Route General Grain Grain Hardware Ovalized Over/Under tolerance Temperature/Cure	Unapproved				<u> </u>		1			<u> </u>	<u> </u>	<u> </u>
Bending Bend Grain Ovalized Pressure/Forced Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure	ļ		,				AULI CA	EGORY			<u>.</u>	
Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure	Landir		1.		Г		<u> Пс:</u>	_	Γ	70		70,000,000 /50,000 d
		├							-	-4		4
									-	_		
Crushed/Crimped Burrs Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled								/Uncloar	⊣ i	├	4	
	Crushed/Crimped Burrs					_		/ Officieal				
Heat Treat Countersink Mislabeled Positioned Wrong	Cuffs Contamination						\vdash		-	┥		

Misread

Out of Calibration

Out of Sequence
Outside Dimensions

Offset

Power Loss/Surge

Other

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

October-19-12 12:48:32 PM

Work Order ID:	91861							
Parent Item:	D350-591-213					Start l	Date: 10/18/12	Required Date: 11/09/12
Parent Item Name:	Heli-Access-Step, Short LH					Start	Qty: 4.00	Required Qty: 4.00
03066-1 Spacer	Manufactured	No		180	Each	179.0000	2	8 B90012 (X)
			Location	Loc Qty		Loc Code		AR 12.11.12
			WA	179				76 70
			90211	30				
			90212	60			(8)	-
			90346	29				-
			90347	60				
23065-041 tep Leg Assembly Hi	Manufactured	No		180	Each	21.0000	1	4 B90012 (4)
			Location	Loc Qty		Loc Code		Ae 12.11
			ST	-30				The 12.11
			WA	21				
			66149	0				-
			79336	1				-
			88822	5			****	- 1
			90011	15				· -
			WA013	30				-
3067-1 and Plate	Manufactured	No		200	Each	226.0000	1	4 Al 12.11/2
			Location	Loc Òty		Loc Code		
			WA	222				
			78608	4				-
			83855	1				-
			90177	15				-
			90178	22				=
			90335	60			_#	-
			90336	60				-
			90486	60				-
			WA016	4				-
			67582	2				-
			68214	1				-
			79607	I				-

NCR: Y	'es / No				WORK ORDER NON-C	CONI	FORN	MANCE / UP	DATE			
										QA Closed:	Date:	·
Work Orde					DISPOSITION	- 1			AGAINST DE	PARTMENT	/PROCESS	
Work Orde	:I				Rework	7		Skid-tube	Crosstube		Water Jet	Engineering
Part N	lo.				Scrap	1 1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, are i					Use-as-is	┪ ┃		noforming	Finishing	4	re/Packaging	Other
NCR N	lo.				Work Order Update	1		Large Fab	Composite		Supplier	
					<u> </u>				beau-	·		
Root				Descri	ption of work order update	In	itial	Ac	tion	Sign &	:	
Cause	Date	Step	Qty	(or Non-conformance	Chie	ef Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup],		
Other						.						
Process												
Supplier												
Training												
Unapproved		.L	<u> </u>	<u> </u>	F	ΔΙΙΙΤ	CATE	GORY		<u> </u>	<u>. </u>	
Landii	ng Gear				General	702.		-				
	Bending				Bend	П	Grain			Ovalized	Γ	Pressure/Forced
	Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		nspecti	ion Incomplete		Part Incorre	ct	Weld
	Crushed/	Crimped			Burrs		nstruct	ions Incomplete	/Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	enance		Part Moved	<u></u>	_
	Heat Tre	at			Countersink		Mislabe	eled		Positioned \	N rong	
	Inspection Strip in Tube Cut Too Short				Cut Too Short		Misread	d		Power Loss/	/Surge	Other
	Ripples in	n Bend			Drill Holes		Offset		-			
	Torque V	Vaves in 8	Extrusio	n 🗌	Drawing		Out of (Calibration				
	Torque Waves in Extrusion Drawing Turning Sequence Finish				Finish		Out of 9	Sequence				

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

October-19-12 12:48:33 PM

Work Order ID:	91861											
Parent Item:	D350-591-213								Date: 10/18/12		Required Date: 11/09	9/12
Parent Item Name:	Heli-Access-Step, S	Short LH							t Qty: 4.00		Required Qty: 4.00	
AN3-85A >> Bolt		Purchased	No			270	Each	190.0000	2	8	20	D
)				Location	<u>n</u>	Loc Qty		Loc Code				7
- A				FG		10						
A					122800	10						٠,
				ST353		180						4
					123352	180						چر
D2856-400 Abrasion Strip		Manufactured	No			270	f	409.2539	0.6	2.4	B8935	2.84
aland @ 7-2				Location	<u>1</u>	Loc Oty		Loc Code				
•				ST403		120.2525						
Υ -	neary				81875	6.398						
	(Carlotte				89352	113.8545						
	8/2/11/16			ST408		216						
					90764	216						
				ST409		73.0014						
					63735	0.6696						
					68076	0.3149						
					71164	8.46			~~~			
					86905	63.5569						
AN4PHA Bolt		Purchased	No			270	Each	132.0000	2	8	-8P -	76
\ \				Location	<u>n</u>	Loc Qty		Loc Code				
				FG		8						,
					120731 .	8						
				ST356		124						15 /
A			-		120731	28			-0	<u>~</u>		The
					122808	96			8)			
AN960JD416 Washer	NAS1149D0463J	Purchased	No			270	Each	29.0000	12	48	12-11 12-11	580
				Location	<u>n</u>	Loc Qty		Loc Code			15-1	1_ 905
				CT251		29					1 	ーノン
				ST351					-			
				31331	116289 119097	8 21				_		•

										DQA:	Date:	
NCR:	Yes / No				WORK ORDER NON-C	CON	IFORN	MANCE / UPDATE		_		
										QA Closed:	• Date:	
M/- 1 O-1					DISPOSITION			AGAINST	ſ DE	PARTMENT/	PROCESS	
Work Orde	er:				Rework	1		Skid-tube Crosstube	<u></u>	1	Water Jet	Engineering
Part f	No				Scrap	1		Machining Small Fak	\vdash	Proc	d. Eng. Coor.	Quality
raiti	···				Use-as-is	1 1		noforming Finishing	-		e/Packaging	Other
NCR N	No.				Work Order Update	1		Large Fab Composite		1.00,010.	Supplier	
						<u> </u>			*******			
Root				Descri	ption of work order update	li	nitial	Action		Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Doc/Data		-				ļ						
Equip/Tooling												
Operator		1										
Material				-								
Setup		1										
Other												
Process	Ш											
Supplier												
Training	Щ											
Unapproved		1	<u> </u>	L		<u> </u>						
						AUL	T CATE	GORY				
Landi	ng Gear				General		C		_	۱	[7 /5
	Bending		Bend BOM/Route				Grain		-	Ovalized	.	Pressure/Forced
		re Not Concentric to O/S BOM/Route					Hardwa		\vdash	Over/Under	 	Temperature/Cure
	Cracks Broken/Damaged					Inspection Incomplete Part Incorrect					Weld	
	Crushed/Crimped Burrs					Instructions Incomplete/Unclear Part Lost/Missing Maintenance Part Moved				ssing	Wrong Stock Pulled	
	Cuffs Contamination					\vdash			\vdash	Part Moved		
Ì	Heat Tre	at		1	Countersink	1 1	Mislabe	eiea	- 1	Positioned V	vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

October-19-12 12:48:33 PM

Work Order ID:

91861

Parent Item:

D350-591-213

Parent Item Name:

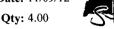
Heli-Access-Step, Short LH

Start Date: 10/18/12

Required Date: 11/09/12

Start Qty: 4.00

Required Qty: 4.00



D2230-1		
Lug		
· T		
·\		
\		
/ \	*	
MS21042L3		
N. 1		
> Nut		
™ (

Purchased

No Manufactured

No

Location Loc Qty Loc Code FG 84136 ST469 257 137 89783 120 90575

270

Each

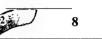
Each

270

122141

3,340.0000

261.0000



Location		Loc Oty	Loc Code
316		651	
	122452	651	
ST300		338	
	117885	32	
	119017	168	
	119075	138	
ST314		1831	
	123265	1831	
ST317		520	

Purchased No

520 270 Each 1,002.0000



Location		Loc Qty	Loc Code
ST356		809	
	122416	287	
	122808	22	
	122993	500	
ST357		193	
	120187	19	
	120770	12	
	121652	161	
	122063	1	

October-19-12 12:48:33 PM

Shop Packet Print

Page 5

											DQA:	Dat	e:	a
NCR:	/es	/ ,No				WORK ORDER NON-C	O	NFORM	AANCE / UPDATE		•		-	<u> </u>
14011.		, ,									QA Closed:	Dat	e:	•
Work Orde	- · ·					DISPOSITION AGAINST DEPA					PARTMENT	PROCESS		
Work Ordi	٤١.					Rework Skid-tube Crosstube						Water Jet		Engineering
Part I	۷o.					Scrap Use-as-is		ı	Machining Small I	Fab	Prod. Eng. Coor. Rec/Store/Packaging			Quality Other
NCR I	No.					Work Order Update			Large Fab Compos		Supplier			
Root					Descri	ption of work order update		nitial	Action		Sign &			
Cause		Date	Step	Qty	c	or Non-conformance	Ch	ief Eng	Description		Date	Verification	n i	QC Inspector
Doc/Data						•						y	•	
Equip/Tooling			:											
Operator							ļ							
Material														
Setup														
Other			}											
Process														
Supplier									:				,	
Training														
Unapproved														
			•			F	AUL	T CATE	GORY					
Landi	ng (ear				General		_			_			_
	П	Bending				Bend		Grain			Ovalized			Pressure/Forced
		Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance		Temperature/Cure
		Cracks				Broken/Damaged		Inspect	on Incomplete		Part Incorre	ct		Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/Unclear		Part Lost/M	issing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance		Part Moved			_
		Heat Trea	ət			Countersink		Mislabe	eled		Positioned \	Vrong		
		Inspectio	Ispection Strip in Tube Cut Too Short					Misrea	d		Power Loss,	'Surge	Г	Other
	\vdash	Ripples in	·					Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

Page 6

October-19-12 12:48:33 PM

Work Order ID:

91861

Parent Item:

D350-591-213

Parent Item Name:

Heli-Access-Step, Short LH

D2732

Manufactured

No

No

Start Date: 10/18/12

Required Date: 11/09/12

Start Qty: 4.00

Required Qty: 4.00

1 4.2105264

Rubber Extrusion

Ostri 194 Ostri

mesous

8/2/11/K

Manufactured

Location ST410

70987

83560

89045

89782

89950

90514

259.4294684 0.3 259.129468

Loc Qty

315

200

19

96

20

7

3900

3000

900

270

Loc Qty

270

Each

316.0000

259.4295

Loc Code

Loc Code

4,305X4 8 20

* B89082-2X * B8326/2X

AN960JD10

NAS1149D0363J

J Pur

Purchased

Purchased

No

No

Location

FG

ST469

270

Each

Each

0.0000

5,326.0000

16/23

20 12-11-15

MS21042L4 Nut

 Location
 Loc Oty
 Loc Code

 314
 1399

 122452
 1399

 ST300
 27

270

119017 121444 ST314

1<u>23021</u> 1<u>23248</u> ⊃W√

MX.

											DQA:	Date	·
NCR: Y	Yes /	No				WORK ORDER NON-	100	NFORI\	MANCE / UPDA				•
										·	QA Closed:	Date	:
Work Orde	or:					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
VVOIK OIGE	=1.					Rework	7		Skid-tube (Crosstube		Water Jet	Engineering
Part N	No.					Scrap	1			Small Fab	Pro	d. Eng. Coor.	Quality
*					:	Use-as-is	1	Therm	oforming	Finishing	Rec/Stor	e/Packaging	Other
NCR N	No					Work Order Update]		Large Fab C	omposite		Supplier	
Root					Descri	ption of work order update		nitial	Action		Sign &		
Cause		ate	Step	Qty	(or Non-conformance	Ch	ief Eng	Descripti	on	Date	Verification	QC Inspector
Doc/Data .													
Equip/Tooling		1											
Operator													
Material	Ш												
Setup								- 1					
Other													
Process													
Supplier							1						
Training													
Unapproved													
•						F	AUI	T CATE	GORY				
Landi	ng Gea	•				General	_	-		<u></u>		_	
	Ber	nding				Bend		Grain			Ovalized		Pressure/Forced
	Cer	ntre No	t Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cra	cks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
	Cru	ished/C	rimped			Burrs		Instruct	ions Incomplete/Uncl	lear	Part Lost/M	issing	Wrong Stock Pulled
	Cut	ffs				Contamination		Mainte	nance		Part Moved		
Heat Treat Countersink					Countersink		Mislabe	led		Positioned \	V rong		
	Inspection Strip in Tube Cut Too Short							Misread	1		Power Loss,	'Surge	Other
	Rin	nles in	oles in Bend Drill Holes								-	_	

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence Wave/Twist in Tube

Torque Waves in Extrusion

Drawing Finish

October-19-12 12:48:33 PM

Work Order ID:

91861

Parent Item:

D350-591-213

Parent Item Name:

Heli-Access-Step, Short LH

Purchased

No

Start Date: 10/18/12

Required Date: 11/09/12

Start Qty: 4.00

244.0000

Required Qty: 4.00

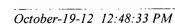
16

AN4-16A Bolt

Location	Loc Qty	Loc Code	
FG	5		
121541	5		
ST357	231		
122814	31		
123352	200		_/QX
ST358	8		
120498	8		

Each

270



NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP[DATE			•
		·							•		QA Closed:	Date	
Work Ord	er: ˌ					DISPOSITION				AGAINST DE	PARTMENT/	PROCESS Water Jet	J
Part No					Rework Skid-tube Crosstube Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite			Small Fab Finishing	Prod Rec/Stor	Engineering Quality Other			
Root		Data	Chara	04		ption of work order update		nitial		ion	Sign & Date	Verification	QC Inspector
Cause		Date	Step	Qty	(or Non-conformance	1 Cn	ief Eng	Descr	ription	Date	vermeation	QC IIISPECTOI
Doc/Data Equip/Tooling													
Operator							ļ						
Material			-					i					
Setup			}										
Other													
Process													
Supplier			1	<u> </u>									
Training													
Unapproved							1						
							AUL	T CATE	GORY				
Land	ing (Gear				General		_		نى	-		
		Bending				Bend		Grain			Ovalized	L	Pressure/Forced
		Centre N	ot Conce	ntric to (o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	ion Incomplete		Part Incorre	ct _	Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/l	Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance		Part Moved		
		Heat Trea	at			Countersink		Mislabe	eled		Positioned V	Vrong	
		Inspectio	n Strip in	Tube	Г	Cut Too Short		Misread Power Loss/Surge Other			Other		
	Ripples in Bend Drill Holes					Offset							
		Torque V	orque Waves in Extrusion Drawing					Out of 0	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence
Wave/Twist in Tube

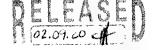
Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G





DESIGN	r	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	•
CHECK	ED	APPROYED	DRAWING NO.	REV. A
4	-	#	D3078 SHEE	ET 1 OF 2
DATE	^^	00.44	TITLE	SCALE
	UZ.	09.11	STEP ASSEMBLY, HI SHORT	NTS
 Α	0	2.09.11	NEW ISSUE	

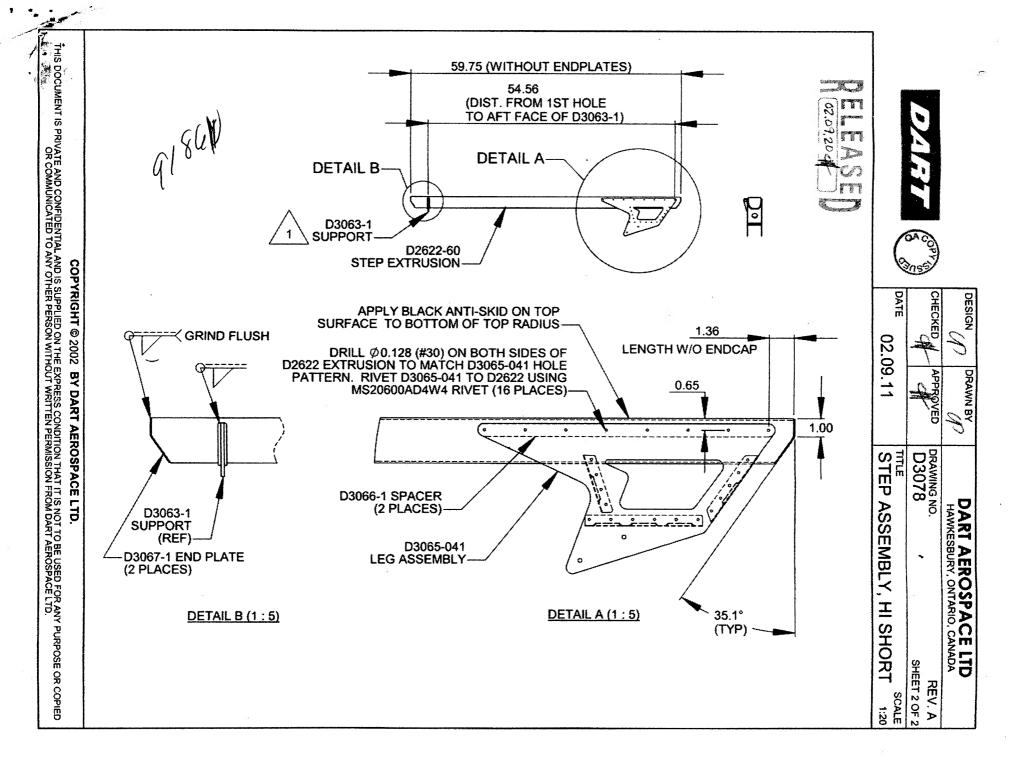


9/8le/ pl/0-10-19

Part No.	Description	QTY -041	QTY -042
D3078-041	Step Assembly, High Short (LH)	X	
D3078-042	Step Assembly, High Short (RH)		Х
D2622-60	STEP EXTRUSION	1	1
D3063-1	SUPPORT	1	1
D3065-041	LEG ASSEMBLY	1	1
D3066-1	SPACER	2	2
D3067-1	END PLATE	2	2
MS20600AD4W4	RIVET	16	16

GENERAL NOTES:

- 1) -041 SHOWN, FOR -042 INSTALL D3063-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
 BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.



DART AEROSPACE LTD.

Qty -211	Qty -212	Qty- 213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X								D350-591-211	Heli-Access-Step™, Long Step – High Skid, LH
	X		-		-			D350-591-212	Heli-Access-Step™, Long Step – High Skid, RH
		Х						D350-591-213	Heli-Access-Step™, Short Step - High Skid, LH
			Х					D350-591-214	Heli-Access-Step™, Short Step – High Skid, RH
				Х		10		D350-591-215	Heli-Access-Step™, Short Step - Low Skid, LH
					Х			D350-591-216	Heli-Access-Step™, Short Step – Low Skid, RH
						Х		D350-591-311	Heli-Access-Step™, Long Step – High Skid, LH
							х	D350-591-312	Heli-Access-Step™, Long Step – High Skid, RH
									
1								D3070-041	STEP ASSEMBLY (HIGH-LONG, LH)
	1							D3070-042	STEP ASSEMBLY (HIGH-LONG, RH)
		1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
			1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
				1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
					1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
						1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
							1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
4	4							D2182B035	RUBBER CUSHION
		2	2	2	2			D2230-1	MOUNTING LUG
		2	2	2	2	4	4	D2230-3	MOUNTING LUG
8	8							D2274	RADIUS BLOCK
			"			2	2	D2618	BUSHING
4	4	-4	-4_	4	4		4-5	-D2732(030-)	TCUSHION-
2	2			_1_	1	2	2_	-D2856-400-720	FABRASION:STRIP
2	2							D3064-1	CLAMP
1	1							D3079-041	SUPPORT ASSEMBLY
4	4							D3080-1	CLAMP
						2	2	D3235-1	MOUNTING LUG
						1	11	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	2	2	AN3-35A	BOLT
10	10	2	2	2	2	<u> </u>		AN4-11A	BOLT
H-10	1-10	4	4	4	4	8	8	AN4-13A	BOLT
			7		· · ·	2	2	AN5-36A	BOLT
4	4	4	4	4	4	4	4	AN960JD10	WASHER
20	20	12	12	12	12	16	16	AN960JD416	WASHER
-20		 '- -		<u>-</u> -	- · <u>-</u>	4	4	AN960JD516	WASHER
2	2	2	2	2	2	2	2	MS21042L3	NUT
10	10	6	6	6	6	8	8	MS21042L4	NUT
— "	 '	 	<u> </u>		<u> </u>	2	2	MS21042L5	NUT

^{*}DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore <u>NOT REQUIRED</u> to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 21 for installation of the DSI 9410-011 Kit.

*DSI 9410-011

STEP MODIFICATION KIT

• COPYRIGHT © 1993 BY DART AEROSPACE LTD •

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: **G**

Date: 08.10.06

Otv. 1	Otv	I Oty I	Qty	Qty	Qty	Qty	Qty	Part Number	Description
Qty -211	Qty -212	Qty	-214	-215	-216	-311	-312	I dit ivalibo	Besonption
X		الشار ا				<u> </u>		D350-591-211	Heli-Access-Step™, Long Step – High Skid, LH
^	Х	 						D350-591-212	Heli-Access-Step™, Long Step - High Skid, RH
		X						D350-591-213	Heli-Access-Step™, Short Step - High Skid, LH
		1-	Х					D350-591-214	Heli-Access-Step™, Short Step – High Skid, RH
				X				D350-591-215	Heli-Access-Step™, Short Step – Low Skid, LH
		 			Х			D350-591-216	Heli-Access-Step™, Short Step Low Skid, RH
		 				X		D350-591-311	Heli-Access-Step™, Long Step – High Skid, LH
							X	D350-591-312	Heli-Access-Step™, Long Step – High Skid, RH
		 						2000 001 012	Transcript Long cup Long cup
1								D3070-041	STEP ASSEMBLY (HIGH-LONG, LH)
	1							D3070-042	STEP ASSEMBLY (HIGH-LONG, RH)
		1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
		T	1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
				1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
					1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
						1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
							1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
4	4							D2182B035	RUBBER CUSHION
		1 2	2	2	2			-D2230-1	MOUNTING LUG
		f2	2	2	2	4	4	D2230-3	MOUNTING LUG
8	8						5/5/	D2274	RADIUS BLOCK
						2	2	D2618	BUSHING
4	4	4	4	4	4			D2732-030 /	CUSHION
2	2	71	_1	1	1	2	2	_D2856-400-720	PABRASION STRIP
2	2							D3064-1	CLAMP
1	1							D3079-041	SUPPORT ASSEMBLY
4	4							D3080-1	CLAMP
						2	2	D3235-1	MOUNTING LUG
						1	1	D3278-041	SUPPORT ASSEMBLY
					_			ANIOGEA	POLT
2	2	1/2	2	2	2	2	2	AN3-35A >	BOLT
10	10	1/2	2	2	2			AN4-11A	BOLT
	ļ	1 4	4	4	. 4	8	8	AN4-13A	BOLT
	ļ			/2009		2	2	AN5-36A	BOLT
4	4	F-4-	4	4	-4-	-4	4-	AN960JD10	WASHER
20	20	12	12	12	12	16_	16	AN960JD416	WASHER
L	L	ļ <u>. </u>				4	4	AN960JD516	WASHER
2	2	/ 2	2	2	2	2	2	MS21042L3 2	NUT
10	10	/6	6	6	6	8	8	MS21042L4	NUT
		-		and the same of		2	2	MS21042Ľ5	NUT
i	l	1			I	1	l 1	*DSI 9410-011	STEP MODIFICATION KIT

^{*}DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 21 for installation of the DSI 9410-011 Kit.



DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G OR EARLIER AND

INSTRUCTIONS OF CONTINUED AIRWORTHINESS ICA-D350-591 REV. 2 OR EARLIER

REF CANADIAN STC: SH92-6 REF FAA STC: SH967NE

For D350-591-213/-214/-215/-216 steps, customers have the option of installing D2732-030 cushion under the clamps to accommodate varying crosstube diameters and to improve fit, as indicted in Installation Instructions D350-591. This Service Instruction adds longer AN4-16A bolts to the parts list to allow installation of these cushions. See Figure 1 on sheet 2 of this service instruction for reference. Installation of the D2856-400-720 Abrasion Strips per Installation Instructions D350-591 is not required when the cushions are installed.

For D350-591-213/-214/-215/-216 steps at CHG 003, the parts list of D350-591 Rev. G and ICA-D350-591 Rev. 2 is amended as follows:

ADD:

Q[y] 213	Qty -214	Qty -215	Qty -216	Part Number	Description
X				D350-591-213	Heli-Access-Step ™, Short Step - High Skid, LH
	Х			D350-591-214	Heli-Access-Step ™, Short Step – High Skid, RH
		X		D350-591-215	Heli-Access-Step ™, Short Step - Low Skid, LH
			Х	D350-591-216	Heli-Access-Step ™, Short Step - Low Skid, RH
4	4	-4-	4	-AN4-16A	BOLT

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

BY: D. SHEPHERD (DE # 02)

DATE: 09.08.05 CERT. NO.: SH92-6 ISSUE NO.: 11

Α	NEW ISSUE			RF	09.08.05
REV.	DESCRIPTION			BY	DATE
DESIGN		P	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN		RF			
CHECKED		u	DRAWING NO.	REV. A	
MFG. APPR.		NIA	DSI 9472	SHEET 1 OF 2	
APPROVED		M	TITLE		SCALE
DE APPR.		_#	BOLT ADDITION		NTS
DATE 09.08.05			COPYRIGHT @ 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR MY PURPOSE ON COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WITTEN PERMISSION FROM DART AEROSPACE LTD.		